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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/533,885	05/05/2005	Stephane Broquere	A279	9731
30593 7590 02/18/2009 HARNESS, DICKEY & PIERCE, P.L.C. P.O. BOX 8910 RESTON, VA 20195				
EXAMINER BRYANT, DOUGLAS J.				
ART UNIT		PAPER NUMBER		
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/533,885

Applicant(s)

BROQUERE ET AL.

Examiner

DOUGLAS BRYANT

Art Unit

4123

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 05/05/2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-7 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-7 is/are rejected.
- 7) ☒ Claim(s) 1-6 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 5/05/2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/550)
- Paper No(s)/Mail Date 08/05/2005, 05/05/2005

- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date: _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Claim Objections

Claim 2 and 3 are objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form.

Regarding claims 1-6 are objected to because of the following informalities.

Claim 1 states "control programme", it should be spelled as "control program" (see lines 9 & 11 of claim 1). Appropriate correction is required.

Claim 2 states "control programme", it should be spelled as "control program" (see line 1 of claim 2). Appropriate correction is required.

Claim 3 states "control programme", it should be spelled as "control program" (see line 1 of claim 3). Appropriate correction is required.

Claim 4 states "control programme", it should be spelled as "control program" (see line 8 of claim 4). Appropriate correction is required.

Claim 5 states "control programme", it should be spelled as "control program" (see line 4 of claim 5). Appropriate correction is required.

Claim 6 states "control programme", it should be spelled as "control program" (see line 6 of claim 3). Appropriate correction is required.

Claim Construction

The following element in claim 2 and 3 are not construed under 35 U.S.C. 112, 6th paragraph: "means to determine".

As per claims 2 and 3, in view of the fact that there is no new and unobvious functional relationship between any of the physical and virtual machines and virtual layer in the claims, they have all been fully considered but not given any patentable weight. See *MPEP 2106.01*

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1-7 rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

- a. The claim language in the following claim is claiming both a product and process:
 - i. As per claim 1, a single claim which claims both an apparatus and the method steps of using the apparatus is indefinite under 35 U.S.C. 112, second paragraph, see *IPXL Holdings v. Amazon.com, Inc.*, 430F.2d 1377, 1384, 77 USPQ2d 1140,1145 (Fed. Cir.2005)
- b. The claim language in the following claim is not clearly understood:

- ii. As per claims 4 (line 5), claim 5 (line 2), and claim 7 (line 3) describe "a virtual machine". It's unclear whether or not this is in reference to "virtual machine" cited in line 19 of claim 1. If so, amend to "the virtual machine". Otherwise amend such that it distinguishes for the virtual machine cited claim 1.
- c. The following claims are generally narrative and indefinite, failing to conform to current U.S. practice. They appear to be a literal translation into English from a foreign document and are replete with grammatical and idiomatic errors:
 - iii. As per claim 4, lines 7-8, "Surveillance of the operating status of a virtual machine thanks to the control program"
 - iv. As per claim 5, line 2-3, "a displacement of a virtual machine of a first physical machine on a second physical machine."
- d. The following terms lack antecedent basis:
 - v. the formation – claim 1 (line 7). For examination purposes, examiner construes "the formation" to "a formation".
 - vi. the virtual layers – claim 1 (line 13)
 - vii. the management process – claim 1 (line 16); claims 4,5, and 7 (line 1). For examination purposes, examiner construes the "management process" to "the system management process".
 - viii. the characteristics – claim 1 (line 20)

- ix. the/this status – claim 2 (lines 2-3); claim 3 (line 2); claim 4 (line 6-10).
- x. the resources – claim 4 (line 4)
- xi. the data – claim 5 (line 6)

Claim Rejections - 35 USC § 101

35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claim 1 rejected under 35 U.S.C. 101 because the claimed invention is directed to neither a "process" nor a "machine". Claims may be rejected under 35 U.S.C. 101 based on the theory that the claim is directed to neither a "process" nor a "machine," but rather embraces or overlaps two different statutory classes of invention set for in 35 U.S.C. 101 which is drafted so to set forth the statutory classes of invention in the alternative, see in re EX parte Lyell, 17 USPQ2d 1551 (Bd. Pat. App. & Inter. 1990).

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claim 1-4 & 7 are rejected under 35 U.S.C. 102 (e) as being anticipated by Nickel et al. (Nickel) US Patent Application Publication 2003/0005068 A1.

With respect to claim 1, Nickel teaches a method for managing applications, making use of at least two physical machines linked by communication means, these machines comprising a physical structure on which is loaded a first software layer adapted to this machine as well as a second layer forming a virtual layer on which virtual machines will operate, the latter comprising at least one application, this method comprising the following steps: connection of at least two physical machines for the formation of a physical machine network (page 3, paragraph 39, lines 1-2), loading of a control programme associated to the virtual layer of each physical machine (page 3, paragraph 39, lines 13-15), establishment of a dialogue between the control programme and a system management process (page 3, paragraph 39, lines 16-18), establishment of a physical machine network including the virtual layers, definition by the system management process of a service containing several applications (by definition PVM Daemon provides point of contact, authentication, process control, and fault detection services), communication between the management process and each virtual layer in order to determine the status of the virtual machines associated to said virtual layer (page 6, paragraph 58, lines 7-9), assignation of a virtual machine to one of the virtual layers taking into account the characteristics of the application (page 4, paragraph 42, lines 3-7 and paragraph 44, lines 4-8).

With respect to claim 2, Nickel teaches a method according to claim 1, wherein the control programme includes means to determine the status of each physical

machine on which a virtual layer is placed and to communicate this status to the management process by communication means (page 7, paragraph 71, lines 2-5).

With respect to claim 3, Nickel teaches a method according to claim 1, wherein the control programme includes means to determine the status of each virtual machine associated to a virtual layer of the concerned physical machine and communicates this status to the management process by communication means (page 6, paragraph 58, lines 5-14).

With respect to claim 4, Nickel teaches a method according to claim 1, wherein the management process carries out the following steps: determination of the characteristics of the virtual machines and of the resources necessary for their operation (page 5, paragraph 56, lines 1-6), assignation of a virtual machine with the virtual layer of a physical machine (page 4, paragraph 40, lines 3-6), surveillance of the operating status of a virtual machine thanks to the control programme (page 6, paragraph 65, lines 11-12), association of the status of each virtual machine forming a service (page 6, paragraph 65, lines 16-18), transmission of this status to an operator (page 6, paragraph 65, lines 14-15).

As per claim 7, the rejection of claim 1 is incorporated. Nickel teaches on a management process includes a definition of the operating constraints of the virtual machines relative to a service (by definition PVM Daemon provides point of contact, authentication, process control, and fault detection services), and wherein the assignation of a virtual machine to a virtual layer of a physical machine (page 4,

paragraph 40, lines 1-4), the displacement of said virtual machine towards another virtual layer takes into account these constraints (page 4 paragraph 45 lines 1-10).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 5-6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nickel et al. (Nickel) US Patent Application Publication 2003/0005068 A1 in view of Adamovits et al. (Adamovits) US Patent No. 6698017.

As per claim 5, the rejection of claim 4 is incorporated; Nickels teaches the transfer of this data towards the second physical machine (page 4 paragraph 45 lines 6-8); however Nickel does not disclose the transmission of a stop instruction to the control programme situated on the first physical machine, establishment of the data pertaining to the stopped virtual machine located on the first physical machine, assignment of the stopped virtual machine towards the second physical machine, the reactivation of the virtual machine.

However, Adamovits does teach on the transmission of a stop instruction to the control programme situated on the first physical machine (col 10, lines 1-4), establishment of the data pertaining to the stopped virtual machine located on the first physical machine (col 9, lines 38-41), transfer of this data towards the second physical

machine (col 10 lines 8-10), assignation of the stopped virtual machine towards the second physical machine (col 10, lines 4-6), the reactivation of the virtual machine (col 10, lines 60-62).

It would have been obvious to a person of ordinary skill in the art at the time of the invention was made to incorporate the teaching of Adamovits into the method of Nickel to have a process to stop a virtual machine on a physical machine and move it to another physical machine to continue where it left off before the interruption signal was sent. The modification would have been obvious because one of the ordinary skill of the art would have created a process to be able to displace one virtual machine on a physical machine to another physical machine to help with load balancing and resource allocation on a computer network or distributing system.

As per claim 6, Adamovits teaches once the virtual machine has been successfully reactivated, the management process transmits the instruction to the control programme of the first machine to suppress the data pertaining to this virtual machine (col 10, lines 60-64).

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Knauerhase et al. (U.S. Publication No. 2004/0268347), Bantz et al. (U.S. Publication No. 2005/0160423), Van Rietschote et al. (U.S. Patent No. 7203944) and Hydrie et al. (U.S. Publication No. 2004/0210623) teach method of virtual machine management.

Hunt et al. (U.S. Publication No. 2004/0205179), Kim (U.S. Publication No. 2004/0148605), Gulko et al. (U.S. Publication No. 7174381) and Vinberg et al. (U.S. Publication No. 2006/0025985) teach methods of distributed system management.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Examiner Douglas Bryant, whose telephone number is 571-270-7707. The examiner can normally be reached on Monday-Thursday and alternate Friday from 8:30 am to 6:30 pm Est.

If attempts to reach examiner by telephone are unsuccessful, the examiner's supervisor, David Robertson can be reached on 571-272-4186. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information about unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have any questions on access to the Private PAIR system contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/D.B/
Examiner, Art Unit 4123

/Emerson Puente/
Primary Examiner, Art Unit 2113